Department of Energy
Washington, DC 20585
July 14, 2000

Document Control Office (7407)
Office of Pollution Prevention and Toxics (OPPT)
Environmental Protection Agency
1200 Pennsylvania Ave., NW
Ariel Rios Building
Washington, DC 20460

Docket Control Number OEI-100000

Dear Sir or Madam:

Re: 65FR37548, Guidance Documents for Dioxin and Dioxin-like Compounds and Other Persistent Bioaccumulative Toxic (PBT) Chemicals; Community Right-to-Know Toxic Chemical Release Reporting

On June 15, 2000, the Environmental Protection Agency (EPA) published a notice in the Federal Register announcing the availability of a draft guidance document for the dioxin and dioxin-like compounds category, which is subject to reporting under section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and section 6607 of the Pollution Prevention Act of 1990 (PPA). The notice requests comments on the draft guidance and also requests participation of interested stakeholders on a workgroup to assist in the preparation of the final guidance document. EPA is considering establishing other workgroups to assist in the development of guidance documents for other PBT chemicals that are subject to the new reporting requirements under the October 29, 1999 Final Rule. Written comments were due to EPA on or before July 17, 2000.

Enclosed for your consideration are comments from the Department of Energy (DOE) on the *Draft Guidance for Reporting Toxic Chemicals within the Dioxin and Dioxin-like Compounds Category*. DOE requests that EPA not finalize this guidance until the workgroup has had the opportunity to comment on the emission factor information requested on page 3 of our detailed comments. DOE also requests that Ms. Jane Powers, Mr. Thomas Feeley, and Ms. Debra Littleton be included in the workgroup to assist in the preparation of the final guidance document and in future workgroups to assist in the development of guidance documents for other PBT chemicals.

The Department appreciates the opportunity to comment on the draft guidance. If you have questions on our comments, please contact Ms. Jane Powers of my staff at (202) 586-7301 or Ms. Debra Littleton, (202) 586-3033, Office of Fossil Energy.

Sincerely,

Thomas T. Traceski
Director, RCRA/CERCLA Division
Office of Environmental Policy and Guidance

Enclosure

U.S. Department of Energy
Comments on Emergency Planning and Community Right-to-Know Act - Section 313: Guidance for Reporting Toxic Chemicals within the Dioxin and Dioxin-like Compounds Category
Docket Control Number OEI-100000
(65 FR 37548, June 15, 2000)

Specific Comments

1. Page 11, Section 2.0. Guidance on Estimating Environmental Releases of Dioxin and Dioxin-Like Compounds

> **EPA provides guidance to be used by facilities in estimating and reporting annual releases and other waste management quantities for the dioxin and dioxin-like compounds category.**

The Department of Energy (DOE) recommends that EPA include sample conversion equations in this section to assist the regulated community in reporting in the required units of grams. For instance, most measurements of polychlorinated dibenzo-para(p)-dioxins/polychlorinated dibenzofurans (PCDD/PCDFs) are in pounds/trillion BTU and would need to be converted to nanograms/kilogram (ng/kg). Providing sample conversion equations would reduce the reporting burden for the regulated community and help ensure more accurate reporting.

2. Page 14, Section 2.2, Consideration of Non-Detects

> **EPA discusses how to interpret detection results in which a CDD/CDF compound is reported by an analytical laboratory as "Not Detected". This section states that for purposes of threshold determinations and the reporting of releases and other waste management quantities for dioxin and dioxin-like compounds, either with monitoring data, or by using the emission factor approach, non-detects are treated as "zero" if that is how the method being used (e.g., Method 1613, Method 23, etc.) treats non-detects.**

DOE concurs with EPA's decision that non-detects be treated as "zero" if that is how the method being used treats non-detects. DOE previously commented on the need for EPA to specify the use of Method 23 related to non-detects during the formal public review process for the January 5, 1999, Proposed Persistent Bioaccumulative Toxic (PBT) Chemicals Rulemaking on the Toxic Release Inventory (TRI).[1]

[1]Dr. Mark Mazur, Senior Policy Advisor, Office of the Secretary, March 22, 1999, Subject: *Proposed EPA Persistent Bioaccumulative Toxic (PBT) Chemicals Rulemaking on the Toxic Release Inventory (TRI)*.

3. Page 23, Section 4.0 Facility-Specific EPA Default Emission Factors

> **In section 4.0, EPA provides default emission factors for facilities to use, at their discretion, in reporting annual releases and other waste management quantities for dioxin and dioxin-like compounds. While EPA encourages reporters to use site-specific information on releases, it recognizes that emissions and environmental release data are not available in most cases.**

DOE recommends that EPA include in this section a conversion table of units that define certain terms (e.g., what N represents in term ng/Nm^3 on page 41) and give conversion factors, such as those for nanograms and picograms to grams. Providing this information would reduce the reporting burden for the regulated community and help ensure more accurate reporting.

4. Page 41, Section 4.5.2. Description/Emissions Factors for Coal-FiredUtility Boilers

> **Section 4.5.2 describes the emission factors for coal-fired utility boilers and discusses the sources from which Table 4-9 was derived. Table 4-9 presents average emission factors (ng/kg of coal combusted) for estimating air releases of dioxin and dioxin-like compounds from coal-fired utility boilers.**

DOE is concerned that there is some confusion on EPA's part regarding the PCDD/PCDF stack emissions testing cited in this section as "a 1993 DOE-sponsored project." This section appears to present the emission factors in Table 4-9 as resulting from DOE studies and it is unclear that this is accurate. DOE and the Electric Power Research Institute (EPRI) did work together in the 1993-94 time frame in an effort to measure hazardous air pollutant emissions, including PCDD/PCDFs, in electric utility flue gases. However, it is unclear whether the data in Table 4-9 is the result of EPRI-sponsored studies, DOE-sponsored studies, or some other studies mentioned in this section.

The 1994 EPRI report referred to on page 41 was **not** published by DOE. It was published by EPRI but it is unclear if the data in Table 4-9 is from this, or another, EPRI report. EPA also references the Field Chemical Emissions Measurement project but it is unclear who the author of this project is and whether any data from this project is included in Table 4.9. This should be clarified and corrected. DOE published the results of their 1993-94 set of testing in a 1996 report entitled *A Comprehensive Assessment of Toxic Emissions from Coal-Fired Power Plants, Phase I Results from the U.S. Department of Energy Study*.[2] This report has not been referenced in this section and it is unclear if EPA extracted any data from this DOE report. Finally, this section reports an attribution to Riggs et al, (1995). It is unclear how this report correlates with DOE's 1996 report or the emission factors in Table 4-9. This should be clarified. In order to clarify the source(s) of the emission factors EPA is proposing, and thus confirm the accuracy of these emission factors, DOE requests that EPA provide the following information:

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[2]University of North Dakota Energy and Environmental Research Center, September 1996, Final Report, *A Comprehensive Assessment of Toxic Emissions from Coal-Fired Power Plants, Phase I Results from the U.S. Department of Energy Study.*

- o the names and locations of the eleven (11) facilities from which the test information in Table 4-9 is derived,

- o the PCDD/PCDF emissions data in the as-measured units in the original reports, and

- o the methodology used to convert emission factors from pounds/trillion BTU to nanogram/kilogram and any assumptions made in that conversion (e.g., coal-heat content).

DOE requests that EPA not finalize this guidance until DOE, as an interested stakeholder and workgroup member, has received the information requested above and has had the opportunity to review and comment on the proposed emission factors in this section.

Section 4.6.4. Hazardous Waste Incineration (HWI) Facilities

> **This section discusses the four principal furnace designs employed for the combustion of hazardous waste in the United States. Table 4-13 gives the average emission factors (ng/kg waste feed) for estimating air releases of dioxin and dioxin-like compounds from hazardous waste combustion facilities.**

A factor which strongly influences dioxin emissions is combustion efficiency. Incinerators which have good combustion, low carbon monoxide (CO) and hydrocarbon emissions, and low sooting have very low dioxin emissions. Poor combustion conditions, on the other hand, provide pathways for enhancing the formation of dioxin and dioxin-like compounds.

This section discusses only the types of combustion devices employed for incineration and completely ignores air pollution control devices (APCD). The amount of dioxin or dioxin-like compounds which are emitted from incinerators is largely impacted by the temperature and time window downstream of the combustion chamber. Typically, incinerators using a rapid quench to cool the hot combustion gases avoid the dioxin formation window where dioxin and dioxin-like compounds can form. Bag-houses or other devices which allow the combustion gas to cool slowly through a temperature window of 150-450 degrees centigrade tend to have higher dioxin emissions.

Some facilities have active capture devices for removing dioxin and dioxin-like compounds, such as carbon injection systems or carbon beds. Dioxin emissions from an incinerator using a carbon injection system will be lower than for incinerators without such capture devices.

DOE suggests that EPA consider whether there is enough data to support developing more than one set of emissions factors for incinerators to distinguish between those having good combustion practices and APCD which control dioxin emissions and those that do not.